1623

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re United States Patent Application of:		**Docket No.:**	**4115-186**
Applicant:	**Wang, et al.**	**Examiner:**	**Unassigned**
Application No.:	**10/518,108**	**Art Unit:**	**1623**
Date Filed:	**December 10, 2004**	**Conf. No.:**	**3314**
Title:	**SCAFFOLDED MALEIMIDE CLUSTER FOR MULTIVALENT PEPTIDE ASSEMBLY**	**Customer No.:**	**23448**

FIRST CLASS MAIL CERTIFICATE

I hereby certify that I am mailing the attached documents to the Commissioner for Patents on the date specified, in an envelope addressed to Mail Stop Amendment, Commissioner for Patents, PO Box 1450, Alexandria, VA 22313-1450, and First Class Mailed under the provisions of 37 CFR 1.8.

Joanna Joslyn

Joanna Joslyn

July 7, 2005
Date of Mailing

INFORMATION DISCLOSURE STATEMENT

Mail Stop Amendment
Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Sir:

Pursuant to 37 C.F.R. §1.56, the attention of the Patent and Trademark Office is hereby directed to the reference(s) listed on the attached PTO/SB/08A. One copy of each reference is attached. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the reference(s) be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

☒ 1. This Information Disclosure Statement is being filed within three months of the U.S. filing date OR before the mailing date of a first Office Action on the merits. No certification or fee is required.

☐ 2. This Information Disclosure Statement is being filed more than three months after the U.S. filing date AND after the mailing date of the first Office Action on the merits, but before the mailing date of a Final Rejection or Notice of Allowance.

☐ a. I hereby certify that each item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. §1.97(e)(1).

☐ b. I hereby certify that no item of information in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application or, to my knowledge after making reasonable inquiry, was known to any individual designated in 37 CFR §1.56(c) more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. §1.97(e)(2).

☐ c. Attached is our check no. _____ in the amount of $_____ in payment of the fee under 37 C.F.R. §1.17(p). Please credit or debit Deposit Account No. _____ as needed to ensure consideration of the disclosed information. Two duplicate copies of this paper are attached.

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Respectfully submitted,

Marianne Fuierer
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Attorney for Applicant

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TECHNOLOGY LAW
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Attorney Ref: 4115-186**

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

Sheet 1 of 5

COMPLETE IF KNOWN	
Application Number	10/518,108
Filing Date	December 10, 2004
First Named Inventor	WANG, et al.
Art Unit	1623
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Attorney Docket Number	4115-186

NON-PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.	Include name of the author (in CAPITOL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, page(s), volume-issue number(s), publisher, city and/or country where published	T[2]
	AA	Akerfeldt, K. S., R. M. Kim, D. Camac, J. T. Groves, J. D. Lear, and W. F. DeGrado. 1992. Tetraphilin: a four-helix proton channel built on a tetraphenylporphyrin framework. J. Am. Chem. Soc. 114:9656-9657.	
	AB	Blaskovich, M. A., Q. Lin, F. L. Delarue, J. Sun, H. S. Park, D. Coppola, A. D. Hamilton, and S. M. Sebti. 2000. Design of GFB-111, a platelet-derived growth factor binding molecule with antiangiogenic and anticancer activity against human tumors in mice. Nat. Biotechnol. 18: 1065-70.	
	AC	Brask, J., and K. J. Jensen. 2000. Carbopeptides: chemoselective ligation of peptide aldehydes to an aminooxy-functionalized D-galactose template. J. Pept. Sci. 6:290-9.	
	AD	Brask, J., and K. J. Jensen. 2001. Carboproteins: a 4-alpha-helix bundle protein model assembled on a D- galactopyranoside template, Bioorg. Med. Chem. Lett. 11:697-700.	
	AE	Calvo-Calle, J. M., G. A. de Oliveira, P. Clavijo, M. Maracic, J. P. Tam, Y. A. Lu, E. H. Nardin, R. S. Nussenzweig, and A. H. Cochrane. 1993. Immunogenicity of multiple antigen peptides containing B and non-repeat T cell epitopes of the circumsporozoite protein of Plasmodium falciparum. J. Immunol. 150:1403-12.	
	AF	Chan, D. C., and P. S. Kim. 1998. HIV entry and its inhibition. Cell. 93:681-4.	
	AG	Dubber, M., and T. K. Lindhorst. 1998. Synthesis of octopus glycosides: core molecules for the construction of glycoclusters and carbohydrate-centered dendrimers. Carbohydr. Res. 310:35-41.	
	AH	Guan, Q.; Li, C.; Schmidt, E. J.; Boswell, J. S.; Walsh, J. P.; Allman, G. W.; Savage, P. B. 2000. Preparation and Characterization of Cholic Acid-Derived Antimicrobial Agents with Controlled Stabilities. Org. Lett. 2:2837-2840.	
	AI	Jensen, K. J., and G. Barany. 2000. Carbopeptides: carbohydrates as potential templates for de novo design of protein models. J. Pept. Res. 56:3-1 1.	

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	AJ	Kilby, J. M., S. Hopkins, T. M. Venetta, B. DiMassimo, G. A. Cloud, J. Y. Lee, L. Alldredge, E. Hunter, D. Lambert, D. Bolognesi, T. Matthews, M. R. Johnson, M. A. Nowak, G. M. Shaw, and M. S. Saag. 1998. Potent suppression of HIV-l replication in humans by T-20, a peptide inhibitor of gp41-mediated virus entry. Nat. Med. 4: 1302-7.	
	AK	Lawless, M. K., S. Barney, K. I. Guthrie, T. B. Bucy, S. R. Petteway, Jr., and G. Merutka. 1996. HIV-l membrane fusion mechanism: structural studies of the interactions between biologically-active peptides from gp41. Biochemistry. 35: 13697-708.	
	AL	Leydet, A., C. Jeantet-Segonds, C. Bouchitte, C. Moullet, B. Boyer, J. P. Roque, M. Witvrouw, J. Este, R. Snoeck, G. Andrei, and E. De Clercq. 1997. Polyanion inhibitors of human immunodeficiency virus and other viruses. 6. Micelle-like anti-HIV polyanionic compounds based on a carbohydrate core. J. Med. Chem. 40:350-6.	
	AM	Lin, Q., H. S. Park, Y. Hamuro, C. S. Lee, and A. D. Hamilton. 1998. Protein surface recognition by synthetic agents: design and structural requirements of a family of artificial receptors that bind to cytochrome c. Biopolymers. 47:285-97.	
	AN	Lindhorst, T. K. 2002. Artificial multivalent sugar ligands to understand and manipulate carbohydrate-protein interactions. Top. Curr. Chem. 218:201-235.	
	AO	Lu, Y. A., P. Clavijo, M. Galantino, Z.Y.Shen, W. Liu, and J. P. Tam. 1991. Chemically unambiguous peptide immunogen: preparation, orientation and antigenicity of purified peptide conjugated to the multiple antigen peptide system. Mol. Immunol. 28:623-30.	
	AP	Lyu, P. C.; Sherman, J. C.; Chen, A.; Kallenbach, N. R. 1991. α-Helix stabilization by natural and unnatural amino acids with alkyl side chains. Proc. Natl. Acad. Sci. USA. 88:5317-5320.	
	AQ	Madder, A.; Li, L.; De Muynck, H.; Farcy, N.; Van Haver, D.; Fant, F.; Vanhoenacker, G.; Sandra, P.; Davis, A. P.; De Clercq, P. J. 2002. Evaluation of a Two-Stage Screening Procedure in the Combinatorial Search for Serine Protease-Like Activity. J. Comb. Chem. 4:552-562.	

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	AR	Malashkevich, V. N., D. C. Chan, C.T. Chutkowski, and P. S. Kim. 1998. Crystal structure of the simian immunodeficiency virus (SIV) gp41 core: conserved helical interactions underlie the broad inhibitory activity of gp41 peptides. Proc. Natl. Acad. Sci. USA. 95:9134-9.	
	AS	McGeary, R. P., I. Jablonkai, and I. Toth. 2001. Carbohydrate-based templates for synthetic vaccines and drug delivery. Tetrahedron. 57:8733-8742.	
	AT	Muster, T., F. Steindl, M. Purtscher, A. Trkola, A. Klima, G. Himmler, F. Ruker, and H. Katinger. 1993. A conserved neutralizing epitope on gp41 of human immunodeficiency virus type 1. J. Virol. 67:6642-7.	
	AU	Mutter, M., and G. Tuchscherer. 1997. Non-native architectures in protein design and mimicry. Cell Mol. Life Sci. 53:851-63.	
	AV	Mutter, M., G. G. Tuchscherer, C. Miller, K. H. Altmann, R. I. Carey, D. F. Wyss, A. M. Labhardt, and J. E. Rivier. 1992. Template-assembled synthetic proteins with four-helix- bundle topology. Total chemical synthesis and conformational studies. J. Am. Chem. Soc. 114: 1463-1470.	
	AW	Nardelli, B., Y. A. Lu, D. R. Shiu, C. Delpierre-Defoort, A. T. Profy, and J. P. Tam. 1992. A chemically defined synthetic vaccine model for HIV-l. J. Immunol. 148:914-20.	
	AX	Nefzi, A.; Sun, X.; Mutter, M. 1995. Chemoselective ligation of multifunctional peptides to topological templates via thioether formation for TASP synthesis. Tetrahedron Lett. 36:229-230.	
	AY	Ni, J.H., S. Singh, and L. X. Wang. 2002. Improved preparation of perallylated cyclodextrins: facile synthesis of cyclodextrin-based polycationic and polyanionic compounds. Carbohydr Res. 337:217-20.	
	AZ	Park, H. S., Q. Lin, and A. D. Hamilton. 1999. Protein surface recognition by synthetic receptors: a route to novel submicromolar inhibitors for alpha-chymotrypsin. J. Am. Chem. Sot. 121:8-13.	
	BA	Peczuh, M. W., and A. D. Hamilton. 2000. Peptide and protein recognition by designed molecules. Chem. Rev. 100:2479-2494.	

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	BB	Rose, K. 1994. Facile synthesis of homogeneous artificial proteins. J. Am. Chem. Soc. 116:30-33.	
	BC	Sasaki, T., and E. T. Kaiser. 1989. Helichrome: Synthesis and enzymatic activity of a designed hemeprotein. J. Am. Chem. Soc. 111:380-381.	
	BD	Shao, J., and J. P. Tam. 1995. Unprotected peptides as building blocks for the synthesis of peptide dendrimers with oxime, hydrazone, and thiazolidine linkages. J. Am. Chem. Soc. 117:3893-3899.	
	BE	Tam, J. P. 1996. Recent advances in multiple antigen peptides. J. Immunol. Methods. 196:17-32.	
	BF	Tam, J. P. 1988. Synthetic peptide vaccine design: synthesis and properties of a high-density multiple antigenic peptide system. Proc. Natl. Acad. Sci. USA. 85:5409-13.	
	BG	Tam, J. P., and Y. A. Lu. 1989. Vaccine engineering: enhancement of immunogenicity of synthetic peptide vaccines related to hepatitis in chemically defined models consisting of T- and B-cell epitopes. Proc. Natl. Acad. Sci. USA. 86:9084-8.	
	BH	Tam, J. P., Y. A. Lu, and J. L. Yang. 2002. Antimicrobial dendrimeric peptides. Eur. J. Biochem. 269:923-932.	
	BI	Tuchscherer, G. 1993. Template assembled synthetic proteins: condensation of a multifunctional peptide to a topological template via chemoselective ligation. Tetrahedron Lett. 34:8419-8422.	
	BJ	Tuchscherer, G., D. Grell, M. Mathieu, and M. Mutter. 1999. Extending the concept of template-assembled synthetic proteins. J. Pept. Res. 54: 185-94.	
	BK	Tuchscherer, G., C. Servis, G. Corradin, U. Blum, J. Rivier, and M. Mutter. 1992. Total chemical synthesis, characterization, and immunological properties of an MHC class I model using the TASP concept for protein de novo design. Protein Sci. 1: 1377-86	
	BL	Wang, C. Y., D. J. Looney, M. L. Li, A. M. Walfield, B. Hosein, J. Ye, J. P. Tam, and F. Wong-Staal. 1991. Long-term high-titer neutralizing activity induced by octameric synthetic HIV-I antigen. Science. 254:285-8.	

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	BM	Wild, C. T., D. C. Shugars, T. K. Greenwell, C. B. McDanal, and T. J. Matthews. 1994. Peptides corresponding to a predictive alpha-helical domain of human immunodeficiency virus type 1 gp41 are potent inhibitors of virus infection. Proc. Natl. Acad. Sci. USA. 91:9770-4.	
	BN	Zhou, X.-T.; Atiq-ur Rehman; Li, C.; Savage, P. B. 2000. Preparation of a Protected Triamino Analogue of Cholic Acid and Sequential Incorporation of Amino Acids in Solution and on a Solid Support. Org. Lett. 2:3015-3018.	

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